Clinical Practice Guideline Implementation

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LTC Vic Eilenfield

CDR Jean Cohn

Maj Dave Parker, MD

Panelists/Outline

- Maj Dave Parker
  - CPGs and their Automation
- LTC Vic Eilenfield
  - Practice Guidelines in the DoD
- CDR Jean Cohn
  - Integrating CPGs with the CPR

Clinical Practice Guidelines and their Automation

The Characteristics and the Challenges

David Parker, USAF, MC
Advanced Technology Integration Center

Multiple Names, Same Concept

- Clinical Practice Guidelines (CPGs)
  - Clinical Preventive Services (CPS)/PPIP is a type of CPG
- Protocols
  - most often used in context of clinical trials, but also used as equivalent to CPGs (e.g. Chemotherapy protocols)
- Clinical Decision Support tools
  - most often used in the context of their automation
- Clinical Pathways
  - The local implementation of a CPG
  - traditionally inpatient

Clinical Practice Guidelines Definition

"Systematically developed statements to assist practitioner and patient decisions about the appropriate health care for specific clinical circumstances"

Institute of Medicine, 1990

What are they for?

- Practice guidelines have been tied in some way, by some individual or organization, to:
  - ***quality***
  - ***costs***
  - ***access***
  - ***patient empowerment***
  - ***utilization variation***
  - ***benefit design***
  - ***competition***
  - ***medical liability***
  - ***professional autonomy***
  - ***bureaucratic micromanagement***

What are they for?

- We usually speak of them helping:
  - Improve Care
    - Bring relevant knowledge & Best Practices to point of care
  - Guide & Facilitate Outcomes Management
  - Control Costs
    - Improve Efficiency
      - Improve access
      - Control Consults
    - Reduced inappropriate interventions

Types of CPGs

(Institute of Medicine categories)

1) **Screening & Prevention**

-Vaccinations needed for foreign travel, PPIP

2) **Diagnosis & Pre-diagnosis Mgmt of Patients**

-Evaluation of chest pain in the ER

3) **Indications for Use of Surgical Procedures**

-Indications for carotid endarterectomy

4) **Appropriate Use of Specific Technologies & Tests**

-Use of autologous blood transfusions

5)**Guidelines for Care of Clinical Conditions**

-Management of Type II Diabetics

Typical Formats of CPGs

- Most Common
  - Narrative text
  - Tables
  - Flowcharts (algorithms)
- Others
  - graphs, lists, critical pathways, if-then-else statements

Automation of CPGs

"Evidence demonstrates that the the most effective method of stimulating awareness of and compliance with best practices is computer generated reminders provided at the point of care."

Zielstorff, JAMIA 1998

What do **CPG systems/engines** do?

- ***Identify guidelines*** that are appropriate for a given patient
- ***Provide Alerts & Reminders***
- ***Suggest*** for a given clinical situation pertinent
  - **data to be collected**
  - **decisions to be made**
  - **actions to be taken**
- ***Track*** a patient's progress through a guideline across time
- ***Compare*** a clinicians management plan with the plan recommended by the guideline
- ***Provide links*** to reasoning behind guidelines

Challenges to Automating CPGs

- General Difficulties
  - Development, approval, consensus of CPGs themselves
  - Guidelines are frequently not sufficiently explicit (e.g. branch points, states & modifiers are too vague)
- Automation Difficulties
  - No standards available for describing or representing guidelines electronically
    - Proposed: Guideline Interchange Format (GLIF)
  - Typically the issues are over simplified and development done as an afterthought.

Challenges to Automating CPGs

To be effective, evidence shows they need to be:

- ***Patient Specific***
  - driven by patient specific data (diagnoses, results,etc)
- ***Integrated*** into the standard workflow of the provider
  - General time of encounter/documentation
  - Time of Assessment (making Diagnosis)
  - Time of Order Entry & Consult generation
  - Also effective to send automated reminders etc. directly to patients (outside encounter)_

Key: No duplicate entry or separate/non-integrated applications

Levels of CPG Automation

- **Simply provide links to CPGs online**
- **Dynamic Links based on patient-specific data**
- **CPG items incorporated in documentation templates**
- **Rules-based systems**
  - Guideline progress & protocol/preventive services ***tracking***
  - Algorithmic (“if-then-else”) decision support
    - Alerts & Reminders

Ideal is well integrated features of all the abo

Vision- a scenario

Summary

- Clinical Practice Guidelines are an important part of efforts to accomplish Population Health/Disease Management & Prevention
- They are often misunderstood
- What it takes to successfully implement them is often over-simplified
- Automation is critical
- Automation is commonly only partially done & often poorly integrated into the providers' workflow at the point of care